The Role of Ethnicity in Body Image among Oslo Youth

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Abstract

Ethnicity has been shown to be an important factor in the development of body image, which in turn has consequences for our health and well-being. Several nonwestern cultures traditionally have a heavier body ideal than the current western thin body ideal, although there is now evidence of a globalization of the current western slim and fit body ideal. Data from Longitudinal Young in Oslo (LUNO) was used to explore whether there is a difference in body image between ethnic groups, if these can be attributed to culture, and the relationship between indicators of acculturation and body image. Participants were 2328 9th graders in Oslo, a quarter of which were nonwestern. Several ethnic differences in body image emerged for girls that may be attributed to culture. Specifically, nonwestern girls were found to be less invested in their appearance and less influenced by media ideals than western girls. Girls with stronger Norwegian identity were more satisfied with their appearance. Norwegian born students were more invested in their appearance and more influenced by media body ideals. And Muslim girls were found to be less invested in their appearance and less influenced by media ideals than all other girls. There were no significant ethnicity-based differences for boys. These differences were small but significant, and support earlier findings of cultural differences in body ideals. The results were inconclusive in finding changes in body image due to acculturation. Some results are consistent with a globalization of the current western body ideal.

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Introduction

Overview of This Study

This thesis is a study of ethnicity and body image among teenagers in Oslo. The main question is whether there are differences in body image between ethnic groups. If differences are found, there are two secondary questions: Can these be explained by cultural differences, for instance in body ideals and importance of appearance, or psychosocial factors such as self-esteem and socioeconomic status? Religion is an integral facet of cultural identity for many, and this study will also look at possible links between religion and body image. Further questions are whether we find evidence for a globalization of the current thin and fit western body ideal, and if there is a link between degree of acculturation and body image among nonwestern immigrants.

Ethnicity and culture play an important role in the development of body image, and may function as a protective or risk factor for body image related problems (Grogan, 2008). Body image problems, in turn, have been shown to relate to a wide range of health and behavioral issues such as depression, eating disorders, over-exercise, early and risky sex, and drug use (Grogan, 2008).

Studying the interplay of ethnicity and body image may give us a better understanding of body image in general, and it may also help us target and design more effective interventions. The topic of ethnicity and body image is perhaps especially relevant in Norway today due to the prevalence of body image related problems among young people (Storvoll, Strandbu, & Wichstrom, 2005), combined with an increasingly ethnically diverse population.

This study offers several contributions to the field of ethnicity and body image. It is possibly the first study in Norway on body image and ethnicity, and one of a small number in Scandinavia. It differentiates between ethnic differences in body image which can be attributed to psychosocial factors versus cultural differences. And it includes variables frequently left out of studies of body image and ethnicity, such as indicators of acculturation, religious affiliation, and importance of religion.

Body Image

Body image is a multi-faceted concept, and has been understood and studied from a range of disciplines, including psychology, medicine, neuroscience, and philosophy. In the early 1900s, clinical studies of body image and body schema aimed at understanding phenomena such as phantom limbs (Cash, 2004). In the 1930s, Paul Schilder broadened the field to include neural mapping of normal and healthy body movement and posture.

Somewhat ahead of his time, he recommended an integrated biopsychosocial approach to body image, drawing from neurology, psychology and an understanding of social and cultural dynamics (Pruzinsky & Cash, 2004). The 1950s and 1960s saw an emphasis on a psychodynamic approach to body image, led by Seymour Fisher. This gave way to a predominantly cognitive-behavioral and feminist approach to body image in the early 1990s, often emphasizing its role in eating disorders and obesity (Pruzinsky & Cash, 2004). Current research into body image typically takes a psychosociocultural approach, which will be further described below.

Body image has drawn increased academic and popular attention over the last few decades. It is not uncommon to find articles related to body image in newspapers or magazines in Norway today, and the number of published papers cited in PsychInfo alone went from 726 in the 1970s, via 1428 in the 1980s, to 2766 in the 1990s (Cash, 2004). Using identical search terms – "body image" and "body (dis)satisfaction" - produced 5069 articles published in the 2000s, which is almost a doubling from the previous decade.

Definition of body image. Body image has been used to refer to weight satisfaction, size perception accuracy, body esteem, body dysphoria, body schema, body image disturbance, and more (Pruzinsky & Cash, 2004). Cash and colleagues (2004) define body image as "a multidimensional construct encompassing self-perceptions and attitudes regarding one's physical appearance".

Cash's model of body image. The psychosociocultural model by Thomas Cash (2002) is perhaps the most comprehensive and widely used model of body image. As a heuristic conceptual model it is intended to help organize our thinking about body image, and the causal pathways between its elements are considered complex and multi-directional. I will, in the following, describe the main elements of this model, and include examples of typical findings under each of these.

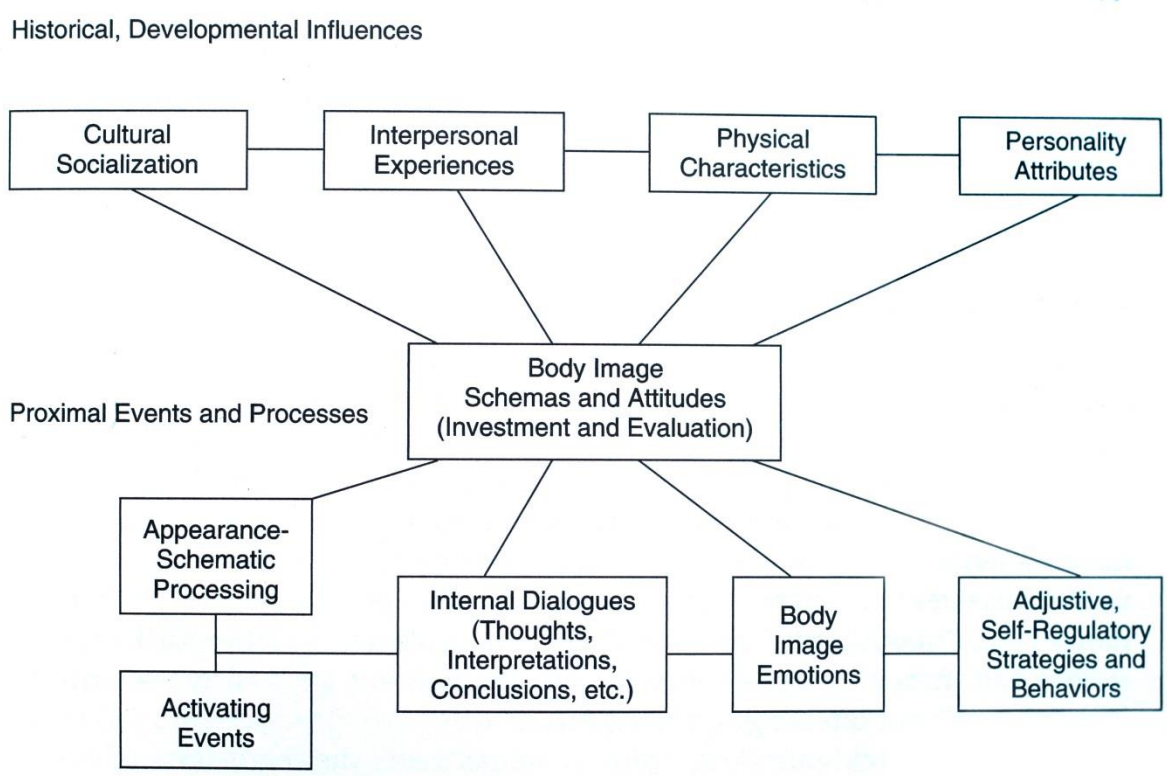

Fig. 1. Cash's cognitive-behavioral model of body image.

From: Cash, T. F. (2002) Cognitive-Behavioral Perspectives on Body Image.

Cash's model is divided into three main segments: (a) Historical factors, referring to prior cognitive social learning. (b) Proximal events and processes, referring to immediate reactions and experiences related to body image. And (c) the resulting body image, split into respectively appearance evaluation (satisfaction with own appearance) and appearance investment (importance of own appearance), and related schemas and attitudes.

Historical factors. Historical factors influence how we are predisposed to relate to our body and include cultural socialization, interpersonal experiences, psychological attributes, and physical characteristics. Cultural messages relating to the body are transmitted to an individual through media, family, and friends, and are actively processed by the individual. These messages include gender- and age-specific ideals for appearance, and also norms and expectations for investment in appearance.

Media is an important channel in our society for transmitting appearance related messages, and although studies have found that, for both genders, higher exposure to these messages is linked with body dissatisfaction, individual processing of these messages determines the outcome (Grogan, 2008).

Interactions with family, friends, and peers also influence body image, for instance through role modeling, conveying similar or different ideals or expectations from mainstream society, and signs of approval or disapproval.

Demographic characteristics play an important role in body image. For instance, women tend to be more dissatisfied than men (Grogan, 2008). This may partly be because the body ideal for men, as presented in the media and through other channels, is more flexible than for women (Grogan, 2008). In interviews, men also tend to express confidence that they can live up to the slim and fit ideal if they invested enough time, while women tend to be less optimistic in that regard (Grogan, 2008). When it comes to age, for girls there is evidence of internalization of the cultural body ideal already at age five, and dissatisfaction with own body at age eight (Grogan, 2008).

Certain psychological characteristics appears central to body image. For instance, higher self-esteem is typically linked to higher body satisfaction, and perfectionism, public self-consciousness, a need for social approval, and insecure attachment are often associated with body dissatisfaction (Cash, 2002).

Physical characteristics change throughout our lifetime, and how well our appearance fits the ideals and expectations of our culture influences how satisfied we are. These physical characteristics include weight, shape and muscularity, and also skin color, and the shape of our face and eyes. In a culture with slim body ideals, being overweight or having a higher than average BMI is a risk factor for body dissatisfaction (Grogan, 2008).

Proximal factors. The proximal events and processes in Cash's model include activating events, body schema processing, internal dialogues, and self-regulating strategies and behaviors. Certain events may lead an individual to bring attention to their appearance, such as exposure of the body, social scrutiny or feedback, and activities involving the body such as exercising or eating. This may lead to self-regulatory processes such as self-talk and behavior to improve appearance or hide parts of the body.

Body image. The resulting body image consists of two main components (Cash, 2002): Appearance evaluation and appearance orientation. Appearance evaluation refers to satisfaction with one's body, and *body satisfaction* is sometimes used here as a synonym. Appearance orientation refers to the importance a person places on his or her appearance, and the amount of resources – for instance time, attention, and money – invested into one's appearance. *Investment in appearance* is sometimes used as a synonym for appearance orientation. There is no given relationship between satisfaction with appearance and investment in appearance. High levels of body satisfaction may be linked with either high or

low appearance investment, and the same is the case with low levels of body satisfaction. A broader and related concept to body image is body image *schemas*, which – among other things – indicate how important appearance is to one's sense of self.

Cash's body image model can be simplified into the following elements (I. L. Kvalem, personal communication, January 25, 2011): (a) The body ideals of a particular culture. (b) Channels transmitting these ideals to the individual, such as media, family, and friends. (c) Individual characteristics influencing how these body ideals are received and whether they are adopted, rejected, or modified. These include demographic variables, psychological make-up, and body characteristics. And (d) the resulting body image, split into body evaluation and body orientation. I will use this simplified model to organize my study.

Body Ideals across Time & Cultures

Body ideals vary between cultures and may also change over time within any one culture. I will here look at theories of why we find these cultural differences, present examples from around the world and the Nordic countries, address the role of ideologies and religion in how we relate to our body, and differentiate between globalization of the current western body ideal and immigrants adopting a local body ideal through acculturation.

Theories of cultural differences. Culture is a complex term. In the context of body image, it can be defined as referring to a shared lifestyle, a shared set of ideals and norms, and exposure to the same media sources within a group of people (Holmqvist & Frisen, 2010). A group that shares a culture may be defined by national borders, it may cross national borders (for instance the Sami or the Kurds), and it may be a subculture within a larger mainstream culture (African-Americans in the United States or Iranians in Norway). Ethnicity is a related term, and can be defined as a social group with a shared ancestry, culture, customs, language, religion, and sometimes physical features (Bhopal, 2004).

Why do we find different body ideals between cultures? And why do we find changes in body ideals over time within a culture, in the absence of obvious cross-cultural influences? Several explanations have been proposed, including situationally triggered predispositions formed through natural selection, ideologies and religion, and body ideals developed to match the typical physical characteristics of members of an ethnic group.

From an evolutionary perspective, favoring a more mature and heavier partner in times of scarcity may provide a survival and reproductive advantage. A more mature partner is likely to have more experience and personal resources, and a heavier partner signals access to food resources. Conversely, we may favor a younger and slimmer partner during times of surplus. Most of the time, we may operate from this biological tendency without conscious

awareness. And we may also, at times, intentionally choose partners based on a similar resource based strategy.

This Environmental Security Hypothesis (Pettijohn & Tesser, 1999) makes intuitive sense based on what we see in the world. In many traditional cultures, access to food is limited so a heavier body type signals status and access to resources and is more desirable. In our current western culture, with easy access to food and where exercise is a sign of access to resources, we – in accordance with this perspective – have a slim and fit ideal. And earlier in our European history, for instance during the Baroque era, we see that more limited food resources went along with a heavier body ideal.

The Environmental Security Hypothesis is supported by some research. For instance, men who were hungry were found to prefer heavier women, perhaps because heavier women signal access to food resources (Swami & Furnham, 2008). And Playboy playmate centerfolds from 1960 to 2000 tend to be more mature and heavier during times of recession, and younger and slimmer during good economic times (Pettijohn & Jungeberg, 2004).

Typical physical characteristics may also play a role in forming body ideals within an ethnic group. Individuals within an ethnic group will share skin color, eye shape, and body size and shape, and tend to develop matching beauty ideals. For instance, South Asian cultures, where bodies tend to be more lightly built, traditionally have a thinner and smaller body ideal compared with the South Pacific and areas of Africa (Grogan, 2008).

In addition, the body ideals of a culture may be influenced by ideologies or religion, and this will be addressed in more detail later.

Body image differences between ethnic groups. Several aspects of body image may be culture dependent. What is considered beautiful and desirable in terms of appearance - the body ideal - differs between cultures and subcultures. Satisfaction with one's appearance, and how important one's appearance is considered, may also vary between ethnic groups. And these differences between cultures may be more pronounced for certain age groups, they tend to be different for women and men, and they change over the course of history.

In considering studies on the topic of ethnicity and body image, it's prudent to keep the possibility of publication bias in mind. Positive findings are more likely to be published than negative findings, and this may create an impression of a greater ethnic difference in body image than what is warranted (Roberts, Cash, Feingold, & Johnson, 2006).

Changes over time. Body ideals have changed considerably in our western culture, as indicated by our visual arts (Grogan, 2008). The Greeks and Romans favored a muscular and fit male body, similar to our times, and a slightly softer and more voluminous female ideal

than we see today. The plump Rubenesque ideal of the 1600s gave way to a slimmer ideal in the 1900s, which in turn has morphed into a slim and fit ideal for women and a slim and more muscular ideal for men since the 1990s. Over recent years, there has been a shift towards a more muscular ideal for women in the western world (Gruber, 2007).

Body ideals across cultures and subcultures. Body ideals vary between geographically distinct cultures, and may also differ between the mainstream culture and subcultures in the same geographic area. Traditionally, we find a heavier and tubular body ideal in the South Pacific (Pollock, 1995) and in areas of Africa. For instance, Ugandan students have been found to prefer significantly heavier females compared with British students (Furnham & Baguna, 1994). In contrast, areas of South Asia have a traditional slim ideal (Grogan, 2008).

Within the African-American subculture in the United States there is typically a heavier body ideal compared with the white majority culture (Cachelin, Striegel-Moore, & Elder, 1998). These differences in body ideals between subcultures are apparent at an early age. For instance, African-American nine-year olds of either gender selected a significantly heavier body ideal than white girls and boys (Thompson, Corwin, & Sargeant, 1997).

Members of ethnic subcultures adopt, reject or modify the body ideals of their host culture for a variety of reasons. They may reject the mainstream body ideal based on a strong identification with their heritage culture, for ideological or religious reasons, or because of a poor match between the mainstream ideal and their own features. They may adopt the mainstream ideal and norms mostly as presented. Or they may adopt and modify these ideals and norms to fit their personal preferences and ideology, and that of their heritage culture. The way members of an ethnic subculture relate to the mainstream body ideal will in turn influence their satisfaction and investment in their own appearance. This will be explored further in the following sections.

Satisfaction with appearance. There are a number of possible reasons for finding differences in satisfaction with appearance between ethnic groups. These include closeness of fit with the mainstream ideal, the centrality of appearance to our sense of self, broadness and flexibility of the beauty ideal, self-esteem, and the relationship of socioeconomic status with body satisfaction.

The body ideal of a particular culture may be more or less easily matched by those who are exposed to it. For instance, the current thin and fit (or muscular) ideal in western society is rarely matched unless there is an intentional effort to do so through diet and exercise. For many, this ideal may seem difficult or impossible to reach. This is one reason

body dissatisfaction is relatively prevalent in western societies (Grogan, 2008). Genetics and body build may give members of ethnic groups an advantage (e.g. the body build of South Asian women) or disadvantage (e.g. skin color and eye shape of South Asians) in matching the western thin ideal.

Different cultures may emphasize appearance as more or less central to our self-esteem and sense of self. For instance, among Asian college students at two universities in the United States, Chinese and Japanese women were both small, yet the Chinese women were satisfied with their appearance while the Japanese women were strongly dissatisfied with their appearance (Yates, Edman, & Aruguete, 2004). The authors suggest this may be because Japanese women live with more strict cultural expectations of thinness, grooming, and placing the needs of others first, while the expectations for Chinese women are more flexible and have, since the Communist takeover of China, included political and ideological expectations of independence, working outside of the home, and being politically active. I will explore the theme of ideologies and religion further in a later section. This study is also a reminder of the importance of taking ethnic subgroup differences into consideration, and not assuming that, for instance, all Asians are the same.

Some cultures have a broader and more inclusive beauty ideal than others. For instance, Parker and colleagues (1995) suggest that African-American women have a more multi-faceted and flexible beauty ideal than European-American women. They value a unique personal style and confidence, speak of "making what you've got work for you", and are less interested in conforming to mainstream ideals of attractiveness. The more restricted and body-centered beauty ideals of European-American women may lead them to be less satisfied with their appearance. This may be one explanation for why African-American women are typically more satisfied with their appearance compared with European-American women, as shown in meta-analyses by Roberts et al. (2006) and Grabe and Hyde (2006).

Self-esteem has been found to be closely linked to body satisfaction (Grogan, 2008). African-American women typically have higher self-esteem than European-American women, and this may be another reason for their higher levels of body satisfaction (Twenge, 2002). It's also possible that white women (mistakenly) assume that men are attracted to thinner women while black women have a more realistic perception of men's preferences (Roberts et al., 2006).

Several studies have found a link between higher socioeconomic status and body dissatisfaction. In the US, affluent African-American women were found to be equally as dissatisfied with their appearance as European-American women (Polivy & Herman, 2002).

This pattern was also found in nonwestern countries (Soh, Touyz, & Surgenor, 2006). In a study comparing body satisfaction among schoolgirls in three socio-economic areas of China, Lee and Lee (2000) found that those in affluent Hong Kong were the least satisfied.

Holmqvist and Frisen (2010), in their review of studies on ethnicity, body image and eating disorders, identified a similar pattern. People in more affluent societies, and with a more western lifestyle, tend to be more dissatisfied with their body. This may be because those in affluent countries are more frequently exposed to western body ideals through the media, and also have more resources to invest in their appearance. Comparing regions, they found that people in some highly westernized and affluent parts of Asia were less satisfied with their bodies than people in the United States. A few studies in this review found no difference in body satisfaction between more or less affluent societies, providing a reminder that other factors besides socioeconomic status are at play in body satisfaction.

Ethnic differences in body satisfaction appear more pronounced for certain age groups. A meta-analysis of black and white women in the United States (Roberts et al., 2006) found the greatest difference in body satisfaction between African-American and European-American women in their early twenties. This age pattern was supported by a meta-analytic review of white and non-white populations and body dissatisfaction (Wildes, Emery, & Simons, 2001). Roberts, Cash et al. (2006) suggest that this is due to increased dating and mate seeking in the early twenties, leading to an increased focus on appearance in that age group.

A smaller number of studies on ethnicity and body image include men. Among these, some find a similar pattern to that seen for women. For instance, studies in the United States have found black men to be more satisfied with their appearance than white men. This matches the findings for women (Grogan, 2008). Other studies find smaller or no ethnic differences for men compared with women regarding body satisfaction. One explanation for this is that appearance may be less central to the sense of self for men than for women, and less important – compared with status and competence - for their attractiveness to potential mates (Grogan, 2008; Sprecher, Sullivan, & Hatfield, 1994).

Investment in appearance. Research on investment in appearance is less voluminous compared with research on satisfaction with appearance, perhaps because it is associated with behavioral and health problems to a lesser degree.

Some of the explanations for cultural differences in investment in appearance overlap the examples discussed previously. For instance, if there is a good fit between the cultural body ideal and one's appearance, investing in one's appearance may be seen as a good

strategy to gain popularity, attract potential mates, or increase self-esteem. And a beauty ideal that is broad and less body-centered, may lead to a lower level of investment in appearance.

Cultures endorse investment in appearance to different degrees. Our current western culture is an example of a culture that encourages it to a relatively high degree. This is, at least in part, fueled by commercial interests, and the main channel for these commercially encouraged attitudes are mass media and advertisements (Grogan, 2008). In contrast, traditional Muslim cultures may de-emphasize attention on appearance. The main source of this attitude may be religion and tradition. And the main channels may be family and religious institutions.

Ideologies and religion may encourage or, more commonly, discourage investment in appearance, and also provide alternate sources of self-worth. This will be addressed more in detail later.

The more central appearance is to our sense of self and our self-worth, the more we are likely to invest in our appearance (Cash, 2002). Different cultures emphasize different sources of self-worth, and the diversity of these sources and the relative importance of each will influence the importance we place on our appearance. As mentioned above, African-American women tend to be less likely to hinge their self-worth on their appearance compared with European-American women (Sanchez & Crocker, 2005), and speak of projecting confidence through how they dress and carry themselves, and "not worrying about your look too much" (Parker et al., 1995). From this, we would expect African-American women to be less invested in their appearance, and some studies support this. For instance, a study by Casper and Offer (1990) found that African-American teenage girls were less preoccupied with their weight compared with European-American girls.

In contrast, Gillen and Lefkowitz (2011) found female African-American college students to be more invested in their appearance than their European-American counterparts. One factor that may make appearance more important for African-American women is if it serves a double function. Parker et al. (1995) suggests that appearance may be an expression of individuality, and also convey an image of their community. This shows that there likely is a complex relationship between cultural identity and attitudes, and investment in appearance.

Ethnicity and body image in Scandinavia. There are few Scandinavian studies published on the role of ethnicity in body image and, as far as I am aware, none in Norway.

A Swedish study found no difference in body satisfaction between Argentinian and Swedish adolescents, although Argentinian adolescents dieted and attempted weight loss more, and Swedish adolescents were more dissatisfied with their body shape (Holmquist,

Lune, & Frisen, 2007). The similarity in body satisfaction may be because Argentinians have adopted a western lifestyle and are exposed to similar body ideals as Swedes.

As of 2010, 11.4% of the population in Norway (552 000 people) were immigrants or born to immigrant parents. Of these, 46.6% were from Europe, 36% from Asia, 12.1% from Latin-America, and 2% were from North America or Oceania. The highest number of immigrants are from the following countries, in descending order: Poland, Sweden, Pakistan, Iraq, Somalia, Germany, Vietnam, Denmark, Iran, Turkey, Bosnia-Herzegovina, Russia, Sri Lanka, Philippines, and United Kingdom (StatisticsNorway, 2010).

Dissatisfaction with appearance is relatively prevalent among teenagers in Norway. A Norwegian study found that between 8 and 20.5 percent of girls, and between 4.8 and 7.0 percent of boys, were extremely dissatisfied with different aspects of their appearance (Storvoll et al., 2005).

Many and perhaps most studies of ethnicity and body image have looked at subcultures within the United States, and especially differences between African-Americans and European-Americans. While these studies may shed light on body image differences between ethnic groups in Norway, it's important to keep in mind that many factors are different as well. For instance, most African-Americans are from families who have been in the United States for several generations and they have had time to develop their own unique subculture distinct from both their heritage culture(s) and the mainstream white culture. In contrast, most nonwestern immigrants to Norway are first or second generation immigrants.

Exposure to Western Body Ideals: Globalization, Acculturation, and Culture Clash. Body ideals from another culture are typically encountered in one of two ways. We may stay in our culture and geography of origin and encounter, and perhaps adopt, foreign body ideals, often transmitted via mass media. We may also move to another culture and encounter the body ideals of this culture through media, friends and colleagues. In the latter case, we may also experience a culture clash between the ideals and values of our family and heritage culture, and the mainstream culture. What happens when culturally embedded body ideals meet in either of these two ways?

Several researchers and commentators have suggested that there is a globalization of the current Western thin body ideal (Grogan, 2008). If this is the case, we should expect to see a thin ideal emerging in cultures with a traditional heavier ideal, and several studies support this. A recent study of Samoans found that the traditional heavy body ideal appeared to be replaced with a slim ideal (Swami, Knight, Tovee, Davies, & Furnham, 2007), most noticeably among the urban and those of higher socioeconomic status. This pattern is

replicated by other studies. For instance, urban subjects in Malaysia and Great Britain prefer a thinner body type for the opposite sex than rural subjects, who prefer a more traditional heavy body type (Swami & Tovee, 2005). A prospective study of adolescent girls in Fiji found an increase in eating disorders following the introduction of television to the island, and interviews with these girls suggested this was due to adoption of the thin western body ideal and unfavorable comparisons with this ideal (Becker, Burwell, Gilman, Herzog, & Hamburg, 2002). And the International Body Project found that higher socioeconomic status subjects over ten countries preferred a thinner body type than those of lower socioeconomic status (Swami et al., 2010). The adoption of the western thin ideal may happen first and predominantly among those of higher socioeconomic status since they have a higher exposure to western media and western body ideals. For some, it may also be associated with higher status to adopt a western body ideal.

Acculturation can be loosely defined as the degree of integration into a new culture, and it includes changes in attitudes, values, identity, and language (Ryder, Alden, & Paulhus, 2000). A frequently used definition of acculturation is "those phenomena which result when groups of individuals having different cultures come into continuous firsthand contact, with subsequent changes in the original culture patterns of either or both groups" (Redfield, Linton, & Herskovits, 1936, p. 149).

As people move to a new geographic area, they may be confronted with body related values, attitudes, and ideals that differ from those of their culture of origin. They will actively process these values, attitudes and ideals, and may adopt, reject or modify them. A common weakness of studies of ethnicity and body image is to not take into account the degree of acculturation, or retention of traditional values (Soh et al., 2006). The studies that do often use one or more indicators of acculturation, such as language proficiency or preference, length of residence in different locations, number of generations in the new country, and ethnicity of friends (Soh et al., 2006). Only a few use a formal measurement of acculturation.

A review of studies of eating and body image disturbances across cultures found few studies that took acculturation into account, and in general mixed and inconsistent findings amongst those that did (Soh et al., 2006). A study of immigrant Muslim women in Australia revealed that internalization of the western thin ideal was correlated with dissatisfaction with appearance, while heritage identification protected against both internalization of the western ideal and appearance dissatisfaction (Mussap, 2009). Similarly, among female students in Singapore, speaking English at home – an indication of exposure to Western culture - was linked with a preference for thinness (Wang, Ho, Anderson, & Sabry, 1999).

Not all studies have found a relationship between acculturation and body image. Japanese adolescents did not show a change in drive for thinness following a study year abroad (Furukawa, 2002). The duration of their immersion in a different culture may not have been long enough to show an effect of acculturation. It is also possible that not enough of the Japanese students visited a culture with a sufficiently different body ideal from their native Japanese ideal for any changes to be statistically significant.

Finally, transitioning from one culture to another and experiencing a culture clash may contribute to body image disturbances (Soh et al., 2006). This culture clash is typically experienced in the tension between the traditional values of parents and family, and the values and ideals of the new culture conveyed through media, fellow students, co-workers, and friends. Some studies on ethnicity, body image and eating disorders have found support for the culture clash assumption (Lake, Staiger, & Glowinski, 1999).

Ideologies and Religion. Ideologies, political views, and religion are among the many factors that influence how invested we are in our appearance, how satisfied we are with our appearance, and also the degree to which we are influenced by body image messages from media and other sources.

Certain ideologies may protect against body dissatisfaction and internalization of beauty related media messages. For instance, women with stronger feminist identity were found in a recent meta-analysis (Murnen & Smolak, 2008) to internalize the thin media body ideal to a lesser degree, to have a lower drive for thinness, and to experience less body shame. These connections were all weak although significant. The authors suggest that feminism may protect against poor body image in three ways. A feminist ideology may be connected to a more sophisticated and critical processing of body ideal messages conveyed through the media. It may lead to activism and collective actions, which in turn brings a sense of increased self-reliance and less reliance on cultural and media messages. And feminism may encourage women to act in their own self-interest rather than following messages from the culture and media.

Religion is an integral part of many cultures, and is for many an important part of their ethnic and cultural identity. A few studies have looked at the connection between religion and body image, and most of these have reported a protective effect of religion. For instance, college age Latter-Day-Saint (LDS) women were found to be more satisfied with their appearance than non-LDS women (Sandberg & Spangler, 2007).

Religion may be protective against body image problems for several reasons. The perception of being loved by God may provide a source of self-worth apart from one’s

appearance, as reported by some of the young women interviewed by Wood-Barcalow and colleagues (Wood-Barcalow, Tylka, & Augustus-Horvath, 2010). Some of these women saw their bodies as a gift from God, and God wishing them to be satisfied with it as it is. In addition, the values and beliefs of religions may discourage internalization of mainstream body ideals and investment in physical appearance. The social benefits of belonging to a religious group, for instance by supporting self-esteem, may also play a role.

Religious commitment and prayer was associated with greater body satisfaction for women in a study of Catholics and Protestants in upstate New York (Kim, 2006). For men, a closer relationship with God was related to higher body satisfaction.

Religions may prescribe clothing, at least as interpreted by certain cultures and by certain members of the religion, and this may influence body image. For instance, Muslim women in the United States wearing traditional attire and a head veil (hijab) were less influenced by the thin ideal compared with non-Muslim women or Muslim women wearing western clothing (Dunkel, Davidson, & Qurashi, 2010). It may be that Muslim women wearing full body covering are more religious, and protected in some of the ways suggested above. It's also possible that covering the body and wearing hijab in itself has a protective function. Self-objectification refers to identifying as one's body and seeing it as an object of desire for others, and several studies have found a connection between self-objectification and body dissatisfaction among women (Smolak & Murnen, 2007). Muslim women who cover their body and head may self-objectify to a lesser degree than other women.

Although most studies have found religion to have a favorable effect on body satisfaction, some studies have found the opposite. For instance, Kim (2006) found negative religious coping connected with body dissatisfaction among Christian women. This shows the value of a more differentiated approach in studying the effects of religion on body image, taking into account that religion may be a protective and a risk factor for body image problems.

This Study

This study is based on data from 9th grade students in Oslo, and the research questions are: (1) Is there a difference in body image between ethnic groups, and can these be attributed to culture? (2) Is there evidence of adoption of the western body ideal by nonwestern students, either through a globalization of the western body ideal, or through acculturation? And (3) is there a relationship between religion and body image?

The third question addresses whether type of religion and degree of religiosity is linked to body image for the participants in this study. Body image here refers to satisfaction

with appearance, investment in appearance, and also degree of influence from body ideals presented by the media.

Method

This study is based on data material from Longitudinell Ung i Oslo (LUNO), a project by Norsk institutt for forskning om oppvekst, velferd og aldring (NOVA). The project leader is researcher Kristin Hegna at NOVA. LUNO is a longitudinal project following students in Oslo for three years from middle school into high school. The main purpose of LUNO is to study differences in higher education depending on gender, social class and ethnicity, and also protective and risk factors for different health and life outcomes.

Samples and Procedures

This study uses data from 2006 (T1) when the participants were students in 9th grade. All schools in Oslo and a total of 3687 students, were invited to participate, and out of 2416 students who agreed to participate, 2328 answered and submitted the questionnaire. This gives a response rate of 63.1% out of all 9th grade students in Oslo.

Each of the schools agreeing to participate in the study appointed a contact person among the teachers. This person contacted parents and students for their written consent, and the students answered the questionnaire over two school hours.

The study design has received approval from Norsk samfunnsvitenskapelig datatjeneste AS (NSD) and Den nasjonale forskningsetiske komité for samfunnsvitenskap og humaniora (NESH).

Measures

Measures of body image. Two subscales from the Multidimensional Body-Self Relations Questionnaire (MBSRQ) by Thomas Cash were used to measure attitudes towards participants' own body. This questionnaire is well validated and intended to be used for individuals age 15 years or older (Brown, Cash, & Mikulka, 1990). The LUNO questionnaire includes all seven questions from the Appearance Evaluation section (satisfaction with own appearance), such as "I am satisfied with my appearance as it is", and "My body is attractive". Six of twelve questions from the Appearance Orientation section (investment in own appearance) are included, such as "It's important that I always look good", and "Before going out among people I always pay attention to how I look". These six were selected based on a factor analysis performed by a student at the University of Oslo, to determine which items best represented appearance orientation (personal communication with I. L. Kvalem, April 4, 2013). See Appendix A for the complete list of items used in these and the following inventories.

Influence of media body ideals was measured using four items from the *Sociocultural Attitudes Toward Appearance Questionnaire* (SATAQ) (Keery, Shroff, Thompson, Wertheim, & Smolak, 2004). Three of these are also found in the *Sociocultural Internalization of Appearance Questionnaire – Adolescents* (SIAQ-A), an abbreviated version of SATAQ (Keery et al., 2004). These questions include "I wish that my body looks like the bodies of people in movies", and "I try to look like an athlete".

All three measures of body image used five-point Likert scales with the following choices: *disagree completely, partly disagree, neither, partly agree,* and *agree completely.* Higher scores on the scales mean, respectively, higher satisfaction with appearance, higher investment in appearance, and higher influence from media body ideals. For the analyses, negatively worded items were reversed, and a single mean score was calculated for each participant for each of the scales. Their response was included if they had answered half or more items on the scale. Cronbach's alpha for Appearance Evaluation was 0.81, for Appearance Orientation 0.82, and for Media Influence 0.74. All of these are satisfactory values and suggest the scales are reliable.

Measures of ethnicity.

Western/nonwestern. Students were coded as western or nonwestern according to father's country of origin. The western category included Europe, North America and Australia, and all other geographic areas were considered nonwestern. A more finely grained geographic categorization and differentiation would have been preferred, but led to groups too small for proper statistical analysis. Initial statistical tests showed that using mother's country of origin did not produce significantly different results from using father's country of origin. The western/nonwestern variable was set up so western students were coded as 1 and nonwestern students as 2.

Ethnic identity was measured by the question "I consider myself Norwegian", followed by five options on a Likert scale: *always true, often true, occasionally true, rarely true,* and *never true*. For the analysis, the scale was reversed so a higher score is associated with stronger Norwegian identity, and the responses were converted to three categories in order to compare groups in later statistical analyses. These combined categories consisted of *never true* and *rarely true, occasionally true* and *often true,* and *always true.*

Language with father. The degree to which students speak Norwegian with their father was used as an indicator of their parents' integration. The question asked was "To which extent do you use Norwegian with family and friends?", the item used for this analysis was "With father", and the five Likert response categories were *always Norwegian, usually*

Norwegian, as often Norwegian as another language, usually not Norwegian, and *never Norwegian*. The scale was reversed, so a higher number indicates more frequent use of Norwegian with the father, and a single mean score was calculated for each participant. Initial statistical tests comparing the degree students speak Norwegian with their mother vs. their father did not reveal significant differences between the two. This allowed me to use language with father as a proxy for parents' integration.

Immigration generation. This variable differentiates the students into first and second generation nonwestern immigrants and western students. A higher number means a longer residency in the west, with first generation nonwestern students coded as 1, second generation nonwestern students as 2, and western students as 3. Nonwestern immigrants were differentiated on the basis of how old they were when they moved to Norway. Nonwestern students born in Norway, or who moved to Norway at age five or younger (preschool age), were classified as second generation immigrants, and students born abroad who moved to Norway later than five years of age were classified as first generation immigrants. Five years was chosen as the cutoff point since those immigrating before that age are presumed to be acculturated similarly to those born in Norway. This variable was based on the questions "Were you born in Norway?" with *yes* and *no, I was born in* ____ as answer alternatives, and "If you were not born in Norway, how old were you when you came here?" and the answer *I was __ years old*.

Religion. Religion was measured by two items. The first, "Which religion or faith do you belong to?" had two answer options: *I don't belong to any religion or faith*, and *I belong to* ____. The second, "How important is religion for you in your daily life?" had four answer categories on a Likert scale: 1) *very important. I place great importance on living according to religious guidelines in daily life,* 2) *religion means much for how I live in everyday life,* 3) *religion means little for how I live in everyday life,* and 4) *religion has no importance for how I live.* This scale was reversed so a higher score indicates a higher degree of religiosity.

Digital media and internet use. These were measured by one main question and eight sub questions. A factor analysis of these revealed two factors with four items in each. Upon inspecting these, I named one digital media use, and the other internet use. The main question was "How often do you usually do this outside of school?". Two of the four items under digital media were "Watch video/DVDs" and "Play TV-games, PC-games, or online-games". And two of the four items in the internet use category were "Participate in chat groups or discussion forums with others who are similar to me/share my interests", and "Use internet to find new friends". Answers were given on a five item Likert scale: *never or almost never, 1-3*

days each month, one or more times weekly, daily or almost daily, and *several times daily.* For each participant, a single mean frequency score was calculated for each of the two factors if two or more questions had been answered for that factor. A higher score indicates higher use of, respectively, digital media or the internet.

Self-esteem. A revised five-item version of Harter's Self-Perception Profile for Adolescents (Lars Wichstrøm, 1995) was used to measure generalized self-worth. Two of these items are "I am generally satisfied with myself" and "I am often disappointed with myself". The four answer categories, using a Likert scale, were *describes me very well, describes me fairly well, describes me fairly poorly,* and *describes me poorly*. These were reversed so a higher score reflects higher degree of self-esteem, and a single mean score was calculated for each participant for each of the scales if they had answered half or more items on the scale. Cronbach's alpha was 0.83 suggesting the scale is reliable.

Socioeconomic Status. Socioeconomic status is a complex concept that seeks to include occupation, education and income. LUNO bases socioeconomic status on the questions "Father's occupation:" and "Mother's occupation:" following a question of whether father or mother currently works. Parents' occupation is classified according to the International Standard Classification of Occupations, ISCO- 88 (International Labor Office, 1990). The occupations were then coded into a variable with six categories based on L Wichstrøm, Skogen, and Øia (1994). For the present study, these six categories were reduced to three to simplify later statistical analysis. The scale was also reversed so a higher number corresponds to higher socioeconomic status.

BMI. Body Mass Index (BMI) was calculated by dividing the weight of each student by the square of their height (kg/m^2). Extreme and likely wrong answers for height or weight were excluded before calculating BMI. This was based on answers to the questions "How much do you think you weigh?" and "How tall are you?".

Analysis Plan

All analyses were run separately for girls and boys. Existing research and theory suggests that body image dynamics are sufficiently different for girls and boys to warrant separate analyses for girls and boys (Grogan, 2008), and preliminary explorations of the LUNO data confirmed this.

Initial analyses described the distribution of demographic variables, and also correlations among the variables in the study.

The main research question is whether there is a difference in body image between ethnic groups. To explore this, a t-test was performed with western and nonwestern background as independent variable, and body image measures as dependent variable.

A more finely-grained view of the relationship between ethnicity and body image was then revealed through several ANOVAs and a t-test.

The first set of ANOVAs included three indicators of acculturation: length of residency in Norway, degree of Norwegian identity, and parental integration. Length of residency in Norway may play a role in body image, and this was explored in an ANOVA comparing three groups - first and second generation nonwestern students and western students - on body image. The second ANOVA used degree of Norwegian identity as independent variable. And the third used the degree students speak Norwegian with their father an indicator of parental integration, and independent variable.

There may be a relationship between religion and body image, and this was explored through three analyses. The relationship between high and low religiosity (independent of religion) and body image was explored through a t-test. The relationship between type of religion and body image was tested through an ANOVA. And the combination of strength of religiosity and type of religion was explored through a final ANOVA. Only Christians and Muslims were included as other religions had too few members for a proper statistical analysis.

Hierarchical multiple regression was finally used to determine the unique contribution of ethnicity-related variables to body image. The analyses for appearance evaluation included socioeconomic status and self-esteem as independent variables in steps one and two, and the analyses for appearance orientation and media influence included socioeconomic status and internet use as independent variables in steps one and two. Socioeconomic status has been shown to influence both appearance evaluation and appearance orientation. It is possible that any relationship found between ethnicity and body image in this study is due to differences in socioeconomic status between the groups, so socioeconomic status is included as a control variable in both regression models. Self-esteem is associated with appearance evaluation, so self-esteem is included as a control variable in the regression model for appearance evaluation, to control for possible differences in self-esteem between the groups. The same principle is used in the regression model with appearance orientation as dependent variable where internet use is included, in order to control for possible ethnic differences in internet availability and use patterns.

The last two regression models include three indicators of acculturation and also strength of religiosity and type of religion. The three indicators of acculturation are immigrant generation, the degree of Norwegian language use with father, and strength of Norwegian identity. The type of religion was limited to Muslim vs. non-Muslim, as preliminary tests showed Muslim girls to distinguish themselves from the other groups with respect to body image. The generation variable was three-part and included western, 2nd generation immigrant, and 1st generation immigrant, thus reflecting degree of presumed westernization. The correlation levels among the independent variables of each regression model were within the acceptable range for a regression analysis (Pallant, 2007).

BMI was not included in the regression analyses since a major part of appearance satisfaction is dependent on body weight. To control for BMI will thus weaken the validity of the concept of appearance satisfaction.

Results

The distribution of the sociodemographic variables is presented in Table 1.

Table 1: Distribution of sociodemographic variables for girls and boys.

	Girls		Boys		Total
	n	*%*	*N*	*%*	
Age					
13	139	11.3	106	10.0	245
14	1079	87.7	936	88.6	2015
15	13	1.1	14	1.3	27
Western	916	73.9	794	70.3	1710
Non-Western	323	26.1	256	24.4	579
2nd generation	240	86.6	179	83.6	419
1st generation	37	13.4	35	16.4	72
SES					
High	353	36.2	297	37.3	650
Medium	448	46.0	369	46.4	817
Low	173	17.8	130	17.8	303
Language at home					
All Norwegian	836	69.1	717	68.6	1553
Mix	233	19.3	177	16.9	410
Little Norwegian	140	11.6	151	14.5	291
Religion					
None	476	36.0	434	38.4	910
Christian	396	29.9	310	27.5	706
Muslim	171	12.9	153	13.6	324
Other	280	21.2	232	20.5	510
Region					
Europe/North-America	916	74.2	797	76.1	1713
Africa	89	7.2	65	6.2	154
Middle-East	43	3.5	50	4.8	93
Muslim Central Asia	85	6.9	57	5.4	142
Remaining Asia	90	7.3	67	6.4	157
Latin America	12	1.0	11	1.1	23
Total participants	1251	53.9	1068	46.1	2319

Note: SES = Socioeconomic status.

As we see in Table 1, most of the sociodemographic variables are equally distributed between girls and boys. Since the sample was drawn from 9th grade the majority of the participants are 14 years of age. In terms of ethnicity, about a quarter of the students are nonwestern, with a majority of these second generation immigrants. Of these nonwestern students, one in ten has Middle Eastern or Muslim Central Asian origins. Slightly less than a quarter, about one of five, speaks a language other than Norwegian at home. Less than two thirds describe themselves as religious, and of these, a majority is Christian and the second

largest group – about a quarter – is Muslim. And most students are in the medium and high socioeconomic status categories. Not all students who reported being nonwestern answered whether they were first or second generation immigrants, which explains why the number of nonwestern girls and boys is higher than the combined numbers of first and second generation girls and boys.

Table 2: Correlations, Means and Standard Deviations of major variables for girls (lower left diagonal) and boys (upper right diagonal).

	Girls													Boys	
	M	*SD*	AE	AO	MI	BMI	SES	W	Nfa	R	DM	I	SE	*M*	*SD*
AE	3.33	0.80	-	.35**	-.12**	-.14**	.09*	-.08*	.06	-.03	-.03	-.10**	.18**	3.63	0.73
AO	3.89	0.78	.18**	-	.25**	-.04	.05	-.04	.04	-.01	.01	.06	.02	3.31	0.83
MI	2.78	1.02	-.29**	.30**	-	.12**	.05	-.02	.02	.00	.04	.19**	-.02	2.42	0.95
BMI	19.51	4.83	-.17**	-.02	.10**	-	-.03	.03	-.03	.02	.03	.12**	.06	19.96	4.66
SES	1.82	0.71	.06	.15**	.06	-.07*	-	-.27**	.22**	-.18**	-.09*	-.13**	.01	1.79	0.70
Western/not	1.26	0.44	.02	-.19**	-.19**	.03	-.38**	-	-.65**	.57**	.06	.17**	.03	1.24	0.43
N. w. father	4.32	1.17	.02	.11**	.14**	-.03	.26**	-.65**	-	-.47**	.00	.11**	.01	4.25	1.28
Religion	1.85	0.89	.02	-.12**	-.12**	.07*	-.28**	.60**	-.46**	-	.04	.15**	.07*	1.89	0.94
Digital media	2.44	0.62	.00	-.04	-.01	-.05	-.05	.11**	-.11**	.13**	-	.40**	.01	2.88	0.69
Internet	1.57	0.71	-.08*	.12**	.15**	.02	-.09*	.13**	-.10**	.05	.26**	-	.07*	1.69	0.82
Self-esteem	2.65	0.37	.34**	-.04	-.18**	-.01	-.10**	.14**	-.12**	.19**	.08**	-.07*	-	2.77	0.36
N	1246-974													1056-796	

Note. AE = Appearance Evaluation; AO = Appearance Orientation; MI = Media Influence; SES = Socio-Economic Status; Nfa = Degree of speaking Norwegian with father; R = Degree of importance of religion. * $p < .05$ | ** $p < .01$

Testing the mean differences between girls and boys on all the variables in table 2 using a t-test, we find that boys are significantly more satisfied with their appearance than girls (t=-9.42, df=2271, p<0.01), less invested in their appearance (t=17.17, df=2166, p<0.01), and less influenced by media body ideals (t=8.61, df=2234, p<0.01). For both genders, there is a positive correlation between satisfaction with appearance and investment in appearance, and between investment in appearance and influence by media body ideals, and a negative correlation between influence by media body ideals and satisfaction with appearance.

In terms of ethnicity, western girls are more invested in their appearance and more influenced by body ideals in media compared with nonwestern girls, and western boys are more satisfied with their appearance compared with nonwestern boys. More religious girls are less invested in their appearance and less influenced by media body ideals, as are girls who speak Norwegian at home less frequently.

For girls, higher socioeconomic status is positively correlated with investment in appearance, wanting to look like media ideals, and lower BMI. For boys, higher

socioeconomic status is positively correlated with satisfaction with appearance. We also see that western students are higher on socioeconomic status than nonwestern students.

There is no significant relationship between body image and level of digital media use for either girls or boys. Girls who use internet more are more influenced by media ideals and more invested in their appearance, and all students who use internet more are less satisfied with their appearance. Higher self-esteem is related to higher appearance satisfaction for both genders, and lower media body ideal influence for girls.

Ethnicity and Body Image

An analysis of differences in body image between western and non-western students is presented in Table 3.

Table 3: Mean differences in body image measures between western and non-western girls and boys. T-test.

	Girls							Boys						
	Western			Non-Western				Western			Non-Western			
	n	*M*	*SD*	*n*	*M*	*SD*	t-value	*n*	*M*	*SD*	*n*	*M*	*SD*	t-value
AE	882	3.31	0.90	307	3.34	0.80	-0.54	770	3.66	0.72	245	3.52	0.78	2.54*
AO	882	4.00	0.74	307	3.64	0.83	6.14*	769	3.32	0.83	246	3.25	0.82	1.14
MI	874	2.90	0.99	297	2.45	1.01	6.69*	758	2.41	0.91	245	2.37	1.02	.69
BMI	817	19.39	4.71	262	19.70	3.53	-.96	732	19.87	3.79	228	20.24	6.83	-.78

Note: AE = Appearance Evaluation; AO = Appearance Orientation; MI= Media influence; BMI = Body Mass Index. * $p < .05$

Table 3 shows that nonwestern girls are significantly less invested in their looks and less influenced by media ideals than western girls, and nonwestern boys are less satisfied with their appearance than western boys.

Generational Differences

To further explore differences in body image between western and nonwestern students, I first differentiated between first and second generation nonwestern immigrants (Table 4).

Table 4: Mean differences in body image measures between western 1st- and 2nd generation non-western girls and boys. ANOVA.

	Girls										Boys									
	Western			2nd generation			1st generation				Western			2nd generation			1st generation			
	n	*M*	*SD*	*n*	*M*	*SD*	*n*	*M*	*SD*	f-value	*n*	*M*	*SD*	*n*	*M*	*SD*	*n*	*M*	*SD*	f-value
AE	882	3.31	0.80	236	3.29	0.80	35	3.51	0.72	1.09	770	3.66	0.73	173	3.49	0.79	31	3.53	0.74	4.10*
AO	882	3.97	0.74	235	3.60	0.79	35	3.95	0.86	22.32*	769	3.32	0.83	173	3.29	0.81	32	3.20	0.81	0.44
MI	874	2.90	0.99	229	2.46	1.04	33	2.34	0.80	21.27*	758	2.41	0.92	172	2.41	1.05	32	2.59	0.98	0.56
BMI	817	19.39	4.71	206	19.75	3.63	28	18.83	2.84	0.80	732	19.87	5.29	157	19.76	6.40	31	22.33	2.69	4.16*

Note: AE = Appearance Evaluation; AO = Appearance Orientation; MI = Media influence; BMI = Body Mass Index. * $p < .05$

Tukey HSD post hoc tests revealed that second generation nonwestern girls were less invested in their look than both first generation nonwestern girls and western girls, and second generation boys were less satisfied with their appearance than western boys. Both groups of nonwestern girls were significantly less influenced by media ideals than western girls, and first generation nonwestern boys have higher BMI than the two other groups.

Ethnic Identity

Among nonwestern students, differences in ethnic identity were not significantly linked to body image, as shown in Table 5.

Table 5: Norwegian identity among nonwestern students, and mean difference in body image measures for non-western girls and boys. ANOVA.

	Girls										Boys									
	Always			Often/sometimes			Rarely/never				Always			Often/sometimes			Rarely/never			
	n	*M*	*SD*	*n*	*M*	*SD*	*n*	*M*	*SD*	f-value	*N*	*M*	*SD*	*n*	*M*	*SD*	*n*	*M*	*SD*	f-value
AE	30	3.56	0.87	147	3.29	0.80	112	3.33	0.76	1.44	21	3.77	0.83	111	3.50	0.75	96	3.56	0.72	1.14
AO	30	3.42	0.93	148	3.71	0.78	112	3.63	0.85	1.60	21	3.44	0.94	112	3.30	0.77	96	3.21	0.84	0.76
MI	30	2.48	1.09	144	2.53	1.02	108	2.29	0.95	1.83	21	2.31	1.42	111	2.36	0.92	96	2.40	0.96	0.11
BMI	25	19.91	3.57	130	19.61	3.20	94	20.01	4.06	7.36	21	20.12	3.28	106	20.19	7.32	87	20.25	7.31	0.00

Note: AE = Appearance Evaluation; AO = Appearance Orientation; MI = Media influence; BMI = Body Mass Index.

When western students were included in the analyses, several differences in body image measures were revealed (Table 6).

Table 6: Norwegian identity for all students, and mean difference in body image measures for girls and boys. ANOVA.

	Girls										Boys									
	Always			Often/sometimes			Rarely/never				Always			Often/sometimes			Rarely/never			
	n	*M*	*SD*	*n*	*M*	*SD*	*n*	*M*	*SD*	f-value	*n*	*M*	*SD*	*n*	*M*	*SD*	*n*	*M*	*SD*	f-value
AE	754	3.37	0.79	306	3.22	0.81	149	3.27	0.79	4.26*	636	3.70	0.73	247	3.55	0.69	138	3.53	0.77	5.62*
AO	754	3.98	0.76	307	3.82	0.74	150	3.66	0.85	12.59*	636	3.34	0.77	247	3.31	0.77	138	3.12	0.88	2.19
MI	746	2.87	0.99	303	2.72	1.03	145	2.44	1.03	12.01*	627	2.39	0.93	245	2.49	0.95	138	2.38	0.94	1.25
BMI	699	19.30	4.57	274	19.66	4.22	125	20.56	7.11	3.69*	606	19.86	5.45	235	19.90	5.45	123	20.32	6.44	0.49

Note: AE = Appearance Evaluation; AO = Appearance Orientation; MI = Media influence; BMI = Body Mass Index.

Girls who always identify themselves as Norwegian were more satisfied and more invested in their looks, and were more influenced by media body ideals than girls who often or rarely identify themselves as Norwegian. And boys who always identify as Norwegian were more satisfied with their appearance than boys who rarely identified as Norwegian.

Language with Father

The degree to which a student spoke Norwegian with their father was used as an indicator of parental integration in the Norwegian culture. Body image differences depending on Norwegian language use with the father are presented in Table 7.

Table 7: Mean difference in body image measures for girls and boys, and between groups according to the extent students speak Norwegian with their father at home. ANOVA.

	Girls										Boys									
	Western and Norwegian			Nonwestern and Norwegian			Nonwestern and not Norw.				Western and Norwegian			Nonwestern and Norwegian			Nonwestern and not Norw.			
	n	*M*	*SD*	*n*	*M*	*SD*	*n*	*M*	*SD*	f-value	*n*	*M*	*SD*	*n*	*M*	*SD*	*n*	*M*	*SD*	f-value
AE	882	3.31	0.80	193	3.36	0.80	100	3.33	0.77	0.29	770	3.66	0.72	130	3.53	0.82	105	3.49	0.72	3.49*
AO	882	3.97	0.74	193	3.67	0.84	99	3.65	0.74	18.01*	769	3.32	0.83	131	3.28	0.76	105	3.20	0.90	1.07
MI	874	2.90	0.99	187	2.51	0.97	96	2.32	1.03	23.73*	758	2.42	0.91	132	2.47	1.06	103	2.25	0.93	1.75
BMI	817	19.39	4.71	164	19.67	3.55	87	19.84	3.57	0.58	732	19.87	3.80	122	20.66	8.63	97	19.59	3.74	1.78

Note: AE = Appearance Evaluation; AO = Appearance Orientation; MI = Media influence; BMI = Body Mass Index. | * $p < .05$

Post hoc comparisons revealed that nonwestern girls are less invested in their appearance than western girls, independent of language spoken with their father. Nonwestern boys who speak less or no Norwegian with their father are less satisfied with their appearance than western boys.

Religion

Independent of type of religion, highly religious girls were less invested in their appearance and less influenced by media body ideals compared with less religious and non-religious girls (Table 8).

Table 8: Importance of religion in daily life and mean difference in body image measures. T-test.

	Girls							Boys						
	High importance			Low/no importance				High importance			Low/no importance			
	n	*M*	*SD*	*n*	*M*	*SD*	t-value	*n*	*M*	*SD*	*n*	*M*	*SD*	t-value
AE	262	3.37	.75	933	3.31	.81	-1.04	234	3.57	.73	778	3.65	.74	1.42
AO	262	3.72	.79	933	3.96	.75	4.32*	235	3.31	.76	777	3.32	.85	.06
MI	250	2.49	1.07	926	2.87	.98	5.09*	233	2.43	1.07	767	2.41	.91	-.23
BMI	218	20.02	5.69	864	19.42	4.66	-1.63	216	20.00	5.18	739	19.94	4.51	-.16

Note: AE = Appearance Evaluation; AO = Appearance Orientation; MI = Media influence; BMI = Body Mass Index. | * $p < .05$

Initial analyses showed that 47.6% girls and 45.8% boys said they belonged to a religion, and the two largest religions were Christianity (36% of girls and 32.9% of boys) and Islam (15.5% of girl and 16.3% of boys). Combining degree of religiosity and type of religion (Christianity vs. Islam) revealed a more specific pattern, as shown in Table 9.

Table 9: Christians and Muslims, level of importance of religion in daily life, and body image measures. ANOVA.

	Girls													Boys										
	Christian						Muslim							Christian						Muslim					
	Low			High			Low			High				Low			High			Low			High		
	n	*M*	*SD*	*n*	*M*	*SD*	*n*	*M*	*SD*	*n*	*M*	*SD*	f-value	*n*	*M*	*SD*	*n*	*M*	*SD*	*n*	*M*	*SD*	*n*	*M*	*SD*	f-value
AE	392	3.38	0.81	77	3.29	0.74	36	3.03	0.77	152	3.39	0.77	2.41	300	3.68	0.74	71	3.71	0.73	30	3.68	0.78	136	3.53	0.76	1.53
AO	392	4.01	0.72	77	3.90	0.76	36	3.67	0.78	152	3.63	0.80	10.60*	299	3.35	0.88	32	3.32	0.64	30	3.20	0.88	136	3.31	0.86	.30
MI	390	2.88	0.98	75	2.83	1.11	36	2.87	1.04	144	2.34	1.02	10.55*	299	2.41	0.87	41	2.41	0.98	29	2.44	0.99	137	2.38	1.10	.05
BMI	366	19.46	5.54	67	19.63	3.05	28	20.75	4.37	124	20.39	7.11	1.14	292	19.93	4.11	61	19.61	2.48	27	22.33	13.70	125	20.39	6.40	1.84

Note: AE = Appearance Evaluation; AO = Appearance Orientation; MI = Media influence; BMI = Body Mass Index. * $p < .05$

Post hoc tests showed that highly religious Muslim girls were less invested in their looks than both groups of Christian girls, as were less religious Muslim girls compared with

less religious Christian girls. Highly religious Muslim girls were less influenced by media body ideals than all other groups.

Regression Models

The following regression analyses, presented in tables 10 through 13, identify the unique and significant contributions of the main variables in this study to body image.

Table 10 shows the regression analysis with western vs. nonwestern students as independent variable and satisfaction with appearance as dependent variable. Socioeconomic status was added as an independent variable in step one, and self-esteem was added in step two.

Table 10. Summary of linear regression analysis predicting appearance evaluation for girls and boys.

		Girls N=897			Boys N=735		
		β	t	p	β	t	p
Appearance Evaluation			R^2=.00			R^2=.01	
Step 1	Western / nonw.	.05	1.27	.20	-.06	-1.53	.13
	SES	.08	2.19	.03	.08	2.07	.04
			R^2=.13			R^2=.04	
Step 2	Western / nonw.	.00	0.10	.92	-.07	-1.74	.08
	SES	.10	2.86	.00	.08	2.00	.05
	Self-esteem	.35	11.09	.00	.18	4.94	.00

Ethnicity has no significant unique contribution to satisfaction with appearance for either girls or boys, when controlling for socioeconomic status. However, there was a positive relationship between socioeconomic status and satisfaction with appearance for both genders independent of ethnicity, and a positive relationship with self-esteem and satisfaction with appearance for both genders independent of ethnicity and socioeconomic status (Table 10).

The following regression analysis (Table 11) is identical, except that investment in appearance and influence of media body ideals are dependent variables, and in step two internet use was entered as an independent variable. Internet use was introduced since the correlation analysis (Table 1) showed a significant relationship between internet use and body image, and digital media was left out due to a lack of such a relationship.

Table 11. Summary of linear regression analysis predicting appearance orientation and media influence for girls and boys.

		Girls N=692			Boys N=551		
		β	t	p	β	t	p
Appearance Orientation			R^2=.04			R^2=.00	
Step 1	Western / nonw.	-.15	-4.20	.00	-.03	-0.64	.52
	SES	.09	2.60	.01	.04	1.08	.28
			R^2=.06			R^2=.00	
Step 2	Western / nonw.	-.17	-4.67	.00	-.03	-0.88	.38
	SES	.10	2.80	.01	.05	1.24	.22
	Internet use	.14	4.40	.00	.07	1.80	.07
			R^2=.04			R^2=.00	
Media Influence			N=686			N=545	
Step 1	Western / nonw.	-.20	-5.50	.00	-.01	-0.26	.79
	SES	-.01	-0.31	.76	.05	1.26	.21
			R^2=.07			R^2=.04	
Step 2	Western / nonw.	-.22	-6.12	.00	-.04	-1.04	.30
	SES	-.00	-0.09	.76	.07	1.77	.08
	Internet use	.18	5.52	.00	.21	5.59	.00

For girls, being western is related to being more invested in their appearance when socioeconomic status (step one) and internet use (step two) are controlled for. In this model, higher socioeconomic status is positively related to investment in appearance for girls when internet use is controlled for. There were no significant relationships between these variables and body image for boys.

Being a western girl is associated with higher influence of media body ideals when socioeconomic status (step one) and internet use (step two) are controlled for. And higher levels of internet use were associated with higher levels of media body ideal influence when socioeconomic status was controlled for (Table 11).

Table 12 shows a regression analysis with five markers of acculturation as independent variable and satisfaction with appearance as dependent variable. Self-esteem was included as independent variable in step two. This will show the unique contribution of each acculturation variable to satisfaction with appearance.

Table 12. Summary of linear regression analysis predicting appearance evaluation for girls and boys.

		Girls			Boys		
		β	t	p	β	t	p
Appearance Evaluation			R^2=.01			R^2=.00	
Step 1	Strength religion	.04	0.86	.39	.04	0.80	.42
	Type religion	-.02	-0.39	.70	-.01	-0.23	.82
	Generation	.10	1.63	.10	-.06	-0.95	.34
	Language	.01	0.13	.90	-.04	-0.547	.59
	Identity	-.14	-2.48	.01	-.07	-1.55	.12
			R^2=.12			R^2=.03	
Step 2	Strength religion	.00	-.01	.99	.03	0.53	.60
	Type religion	-.05	-0.99	.32	-.02	-0.29	.77
	Generation	.07	1.24	.22	-.07	-0.99	.32
	Language	.02	0.35	.73	-.03	-0.51	.61
	Identity	-.10	-1.97	.05	-.08	-1.32	.19
	Self-esteem	.35	9.55	.00	.18	4.18	.00

Norwegian identity contributed significantly and uniquely to satisfaction with appearance for girls when self-esteem was controlled for, with higher Norwegian identity related to higher satisfaction. Self-esteem was related to higher appearance satisfaction for girls and boys (Table 12).

Table 13 shows a regression analysis with the markers of acculturation as independent variables and investment in appearance and influence of media body ideals as dependent variables. Self-esteem was again included as an independent variable in step two.

Table 13. Summary of linear regression analysis predicting appearance orientation and media influence for girls and boys.

		Girls			Boys		
		β	t	p	β	t	p
Appearance Orientation			R^2=.03			R^2=.00	
Step 1	Strength religion	-.01	-0.13	.90	.02	0.38	.70
	Type religion	-.12	-2.24	.03	.00	0.03	.98
	Generation	-.05	-0.83	.41	.01	0.14	.89
	Language	-.03	-0.49	.63	.00	0.06	.95
	Identity	-.06	-1.16	.25	-.08	-1.24	.22
			R^2=.05			R^2=.01	
Step 2	Strength religion	.00	0.03	.98	.02	0.35	.73
	Type religion	-.11	-2.24	.03	.00	-0.03	.98
	Generation	-.07	-1.20	.23	.00	0.07	.94
	Language	-.03	-0.50	.61	.01	0.10	.93
	Identity	-.07	-1.27	.21	-.08	-1.34	.18
	Internet	.14	3.68	.00	.07	1.60	.11
			R^2=.04			R^2=.00	
Media Influence							
Step 1	Strength religion	.02	0.27	.79	-.00	-0.13	.99
	Type religion	-.04	-1.82	.07	-.04	-0.82	.52
	Generation	-.32	-2.19	.03	.06	0.72	.37
	Language	-.01	-0.09	.93	.07	1.16	.29
	Identity	-.01	-0.25	.81	.05	0.47	.45
			R^2=.07			R^2=.04	
Step 2	Strength religion	.02	0.48	.63	-.01	-0.13	.90
	Type religion	-.09	-1.82	.07	-.05	-0.82	.41
	Generation	-.16	-2.71	.01	.05	0.72	.47
	Language	-.01	-0.11	.92	.07	1.16	.25
	Identity	-.02	-0.37	.71	.03	0.47	.64
	Internet	.18	4.95	.00	.20	4.66	.00

Table 13 shows that being Muslim was significantly associated with lower investment in appearance for girls when internet use was controlled for. Degree of religiosity was unrelated to body image for both genders. And higher internet use was related to higher investment in appearance for girls.

Duration of residency in Norway (immigration generation) was positively associated with stronger influence of media ideals for girls when internet use was controlled for. And higher internet use was positively associated with influence of media ideals for both genders.

Discussion

Main Findings

In this study, students with western and nonwestern backgrounds were compared on three measures of body image: satisfaction with own appearance, investment in own appearance, and degree of influence by media body ideals. The aim was to answer three main questions: (1) Is there a difference in body image between ethnic groups, and can these be attributed to culture? (2) Is there evidence of adoption of the western body ideal by nonwestern students, either through a globalization of the western body ideal, or through acculturation? And (3) is there a relationship between religion and body image?

This study revealed that nonwestern girls were less invested in their appearance and less influenced by media body ideals compared with western girls, as were Muslim girls compared with non-Muslim girls, and that this may be attributed to cultural and religious differences. There were several findings compatible with globalization of the western body ideal, and no clear relationship between acculturation and body image. For boys, ethnicity was not significantly related to body image in a way that can be attributed to culture or religion.

I will first discuss findings from this study not directly related to ethnicity, and then use these to shed light on the ethnicity results. In discussing the findings on ethnicity and body image, I will differentiate between ethnic differences in body image that can be attributed to non-cultural and non-religious factors, and ethnic differences which may be attributable to culture or religion.

Findings Independent of Culture and Religion

Although the relationship between ethnicity and body image was the main focus, this study also yielded information on the relationship between body image and other psychosocial variables. I will here briefly discuss these, partly to explore how the findings of this study compare with other studies on body image, and partly because of its later relevance in addressing the main questions of this study.

Gender differences. The initial analyses revealed that boys were more satisfied and less invested in their appearance than girls, and also less influenced by body ideals presented in the media. This corresponds with findings from previous studies (Grogan, 2008), and supports my decision to analyze boys and girls separately. Girls and women may, to a greater extent than boys and men, be objectified and judged by their appearance (Smolak & Murnen,

2007), which may offer an explanation for why they are more invested in their appearance and more influenced by media body ideals.

Body image measures. For both genders, satisfaction with appearance had a positive correlation with investment in appearance. It may be that students who saw themselves as having a natural advantage in terms of appearance chose to invest more time and energy in their appearance, as a way of playing to their strength. The reverse, that investment in appearance lead to greater satisfaction with appearance, may also be true.

We also see that girls and boys who placed more importance on their appearance were more influenced by body ideals presented by the media. It is perhaps not surprising if students who see their appearance as important go to the media for body ideals and suggestions for how to improve their appearance.

Socioeconomic status. For both genders, socioeconomic status was positively related to body satisfaction. This matches some previous research (Grogan, 2008), although studies on ethnicity and body image have typically found the reverse relationship (Frisen & Holmqvist, 2010; Soh et al., 2006). Western students had a higher socioeconomic status than nonwestern students, and they are also likely to fit the Norwegian body ideal more closely. This may be one explanation for the above finding. The correlations revealed that girls with a higher socioeconomic status had higher levels of self-esteem, which may also explain why they were more satisfied with their appearance. This connection was not found for boys. Finally, it may be tempting to assume that students of higher socioeconomic status had a lower BMI, which in turn would lead to higher body satisfaction, but the correlations between these variables in the LUNO material did not support this assumption.

For girls, higher socioeconomic status was related to higher investment in appearance and higher levels of influence by body ideals from the media, and this matches findings from other studies (Frisen & Holmqvist, 2010; Soh et al., 2006). Girls with higher socioeconomic status may have more resources – for instance money and time - to invest in their appearance, and investment in appearance may also be more highly valued among those from a higher socioeconomic background. The link between socioeconomic status and media influence may be explained by having more time for media consumption, although this is not checked for in this study. As mentioned previously, it is also possible that those more invested in their appearance go to the media for body ideals and information about how to narrow the gap between their appearance and these ideals.

Self-esteem. For both genders, self-esteem correlated positively with body satisfaction. This also matches well-established findings from previous studies showing that

people who have higher self-esteem tend to be more satisfied with their appearance (Grogan, 2008). Research suggests that the causal influence may be bidirectional. Self-esteem may influence body satisfaction. And poor body image has been shown to lead to lower self-esteem (Tiggeman, 2005). Girls who had higher self-esteem were less influenced by media body ideals, and here the influence may also be bidirectional. Higher self-esteem may be protective against being influenced by body ideals from the media. And increased exposure to body related messages from the media has been shown to lead to lower self-esteem (L. M. Groesz, Levine, & Murnen, 2002). We also see that self-esteem was linked to higher levels of religiosity, and this is relevant to the discussion on religion and body image in a later section.

Media use. Students who spent more time on the internet were less satisfied with their appearance. It may be that exposure to body ideals through websites, blogs, online magazines, and online movies lead to an unfavorable comparison of their own bodies to these ideals. Although few studies have looked at internet use, several studies have found a connection between exposure to images of slim bodies in media and body dissatisfaction (Lisa M Groesz, Levine, & Murnen, 2001). The analyses also showed that girls who spent more time on the internet were more invested in their appearance, and were more influenced by media body ideals. Again, a higher level of exposure to these body ideals through online images may lead to a greater preoccupation with appearance, and also being influenced by these body ideals to a greater extent. The direction may also go the other way, with those more preoccupied with their appearance and more easily influenced by media body ideals being drawn to internet use, perhaps to seek out body related information and images.

Why did we find a link with body image for internet use and not digital media use? The LUNO data is from 2006 and we can assume that the internet was already then an important channel for body image related messages. Also, of the four items making up the digital media factor, only one – watching movies/DVDs - is an obvious channel for body related messages. This means that the digital media factor may have been a less sensitive instrument for picking up body image variances.

BMI. The correlations showed that for both genders, higher BMI was related to dissatisfaction with appearance, and for boys, BMI was positively correlated with influence by media body ideals and internet use. In other words, heavier students were more dissatisfied with their appearance, which is in line with findings from previous studies (Grogan, 2008). Boys who used the internet more were also heavier, and both internet use and BMI are perhaps indicators of a passive lifestyle. Heavier boys were also more influenced by media

body ideals, possibly because there is a greater discrepancy between the ideal and their reality.

Ethnicity and Body Image

I will in the following discussion on ethnicity and body image differentiate between findings that may be attributed to cultural differences, and findings that can be attributed to sociocultural factors.

Satisfaction with appearance. Previous research has mostly focused on satisfaction with appearance, and found western women generally less satisfied with their appearance compared with their nonwestern counterparts (Grogan, 2008). The LUNO material did not reveal ethnic differences in satisfaction with appearance that can be directly attributed to culture. This may be due to a globalized western body ideal, indicating that nonwestern students and their families were exposed to and may have adopted western body ideals and norms prior to arriving in Norway. The age group may also be too young for such a difference to become visible considering that ethnic differences in body image appear to be more pronounced in the early twenties (Wildes et al., 2001). Another explanation for this result may be that all nonwestern students were combined into one group, which could mask possible differences between specific ethnic groups and the western students regarding their satisfaction with appearance.

When it comes to boys, correlations and a t-test found that western boys were more satisfied with their appearance than nonwestern boys. This relationship disappeared in the regression analysis when socioeconomic status was controlled for, suggesting a shared variance between ethnicity and socioeconomic status. This is supported by the positive correlation between being western and socioeconomic status for boys, and the weak yet significant correlation between socioeconomic status and satisfaction with appearance. Western boys, having a generally higher socioeconomic status, may have more resources to invest in their appearance (Fallon, 1990), which in turn may lead to higher satisfaction with their body. The relationship between socioeconomic status and body satisfaction appears to not be explained by either BMI or self-esteem since socioeconomic status was not significantly correlated with BMI in this study, and socioeconomic status had a significant relationship with body satisfaction also when self-esteem was controlled for.

If the higher body satisfaction for western boys is, at least in part, explained by higher socioeconomic status, why do we not find a similar pattern for girls? Similar to what we see for boys, western girls had higher socioeconomic status than nonwestern girls. And yet, there was no significant relationship between socioeconomic status and satisfaction with

appearance for girls. Socioeconomic status is typically considered more central for men's attractiveness to the opposite sex than is the case for women (Grogan, 2008; Sprecher et al., 1994), and this may explain why we find the link between socioeconomic status and satisfaction with appearance for boys and not girls.

Another question is why we find that western and nonwestern girls were nearly equal in satisfaction with their appearance, while they differed on investment in appearance and influence by related media messages. It is possible that while the media may influence western girls more, the other two main channels for body image messages – family and friends – counteract a possible tendency for body dissatisfaction. This also shows that although western girls in general are more invested in their appearance, the proportion of those satisfied and dissatisfied with their appearance is similar to that of the nonwestern girls.

Investment in appearance and influence by media ideals. Although there were no ethnic differences in satisfaction with appearance that could be attributed to cultural differences, the data did reveal ethnic differences for investment in appearance and influence by media body ideals that may be attributed to culture.

Nonwestern girls were less invested in their appearance and less influenced by media body ideals than western girls, even after socioeconomic status and internet use were controlled for. This suggests that there is something about being a nonwestern girl, independent of socioeconomic status and internet use, which serves to limit their investment in appearance and influence by media body ideals. One possibility is that western girls see their appearance as more central to their self-worth compared with nonwestern girls, which in turn may explain why they are more invested in their appearance (Sanchez & Crocker, 2005). Cultural norms and ideals may also be behind the difference, as suggested by the sociocultural perspective (Jackson, 2002). For instance, a portion of nonwestern girls may come from a cultural background where being overly invested in appearance is discouraged, and I will explore this later. Other factors related to ethnicity may also come into play, such as a mismatch between the physical characteristics of some or most nonwestern girls and the prevalent body ideal in the Norwegian culture. Some nonwestern girls may find Norwegian body ideals less relevant to them as these appear unachievable due to the color of their skin, eye shape, or body build. This, in turn, may explain why they place less weight on body ideals from the Norwegian media. This possibility is difficult to confirm since the LUNO questionnaire only asked for the media channel (internet, DVDs, magazines etc.) and not the ethnic content or geographic source, and it's likely that some nonwestern students sought out sources from their heritage culture and country and thus were exposed to body ideals that did

match their physical features. This analysis of the LUNO data did not provide information to directly support or disprove either of these possibilities. Additional factors may also correlate with ethnicity and explain the findings, but were not controlled for in the regression analysis.

Boys did not present any ethnic differences regarding investment in appearance and influence by media body ideals. Why did we here find an ethnic difference for girls and not boys? As mentioned earlier, it may be that their own appearance is less important for men across many or most cultures. This is a case where an evolutionary and a sociocultural perspective converge in their explanation. Women selecting a male partner may tend to look for status and ability to provide for a family, and men selecting a female partner may prioritize an appearance signaling youth and fertility. This pattern has been supported by empirical data (Sprecher et al., 1994).

Acculturation. If body ideals are different in different cultures, acculturation should provide a bridge from nonwestern to western body ideals. In other words, the more acculturated a nonwestern student is, the more likely they are to have adopted a western body ideal and western appearance related norms. Depending on other factors, such as socioeconomic status, family influences, and physical characteristics, this may or may not translate into nonwestern students being closer to western students in satisfaction with appearance and investment in appearance. What does the LUNO data reveal on the question of acculturation?

Of the three indicators of acculturation used in this study – length of residency in Norway, Norwegian identity, and language with father – two showed a significant relationship with body image for girls, and one for boys. Only one of these can be said to suggest an influence of acculturation on body image.

I will first discuss the results from the initial correlations, t-tests and ANOVAs, and then the results from the regression analyses, which will reveal the unique contribution, if any, of each acculturation indicator to body image.

Residency in Norway. Duration of residency in Norway showed a complex relationship with body image. An initial analysis found that second generation nonwestern girls were less invested in their appearance compared with both first generation immigrant girls and western girls. Second generation immigrant girls may be less exposed to media from their culture of origin, while also not recognizing themselves fully in the body ideals from Norwegian mainstream media. This may mean that first generation nonwestern girls and western girls, more than second generation nonwestern girls, see investment in their appearance as a more viable strategy to improve self-esteem, popularity and so on. In

addition, some studies have found second generation immigrants to be at a disadvantage in several areas of life, possibly because they have a less strong tie to their heritage culture than first generation immigrants, and a less strong tie to their host culture compared with those native to this culture. For instance, Torgersen (2005) found second generation Pakistani immigrants to Norway to have a higher level of psychological symptoms than others. It's possible that the challenges of second generation immigrant girls explain why they are less invested in their appearance. They may, for instance, have fewer resources available to invest in their appearance, or prioritize differently, in comparison with the two other groups.

Nonwestern girls, both first and second generation, were less influenced by body ideals from media compared with western girls. This matches other findings in this study. It may be that a mismatch between the body ideals they see in Norwegian media and their own physical characteristics reduces their interest in these body ideals. The analyses for religion showed that Muslim girls were less invested in their appearance compared with non-Muslim girls. This may also explain this finding, assuming that the majority of Muslim girls are nonwestern immigrants. I will address this further in the section on religion.

Second generation nonwestern boys were less satisfied with their appearance compared with first generation nonwestern boys and western boys. Similarly to above, it may be that first generation immigrants and western boys are more exposed to ideals that match their own appearance. First generation immigrants may be more exposed to media from their culture of origin through their family and friends. Western students are likely most exposed to mainstream western media. And second generation immigrants may be exposed less to media from their culture of origin, while also not fully recognizing themselves in the body ideals from Norwegian mainstream media. Not fitting the ideal they are exposed to may lead them to be less satisfied with their body. As above, it is also possible that the unique challenges of second generation immigrants play a role in their dissatisfaction with their appearance. For instance, psychological problems may translate into lower self-esteem, which in turn leads to body dissatisfaction. This study did not analyze these three groups to see if second generation nonwestern boys were lower on self-esteem compared with first generation nonwestern boys and western boys.

We see here the same pattern of gender difference as elsewhere in this study, where the ethnic difference for girls shows up in investment in appearance and influence by media body ideals, and the ethnic difference for boys shows up in satisfaction in appearance.

Norwegian identity. For ethnic identity, the initial tests revealed that students scoring higher in Norwegian identity were more satisfied with their appearance. Girls higher in

Norwegian identity were also more invested in their appearance and more influenced by body ideals from magazines, movies and other media sources. These results only appeared when western students were included, and not among nonwestern students alone. This suggests that the findings largely represent differences between nonwestern and western students, since it's likely that the group with a strong Norwegian identity consists mostly of ethnic Norwegian students.

Although not directly relevant to acculturation, this may explain why girls with a strong Norwegian identity were here found to be more satisfied with their appearance, while other analyses in this study did not find western girls more satisfied with their appearance compared with nonwestern girls. In this analysis, girls high on Norwegian identity were most likely ethnic Norwegian, meaning that they scored higher in satisfaction with appearance compared with non-Norwegian western girls and nonwestern girls. This suggests that ethnic Norwegian girls differ in some aspects of body image compared with other western girls living in Norway.

Language use at home. The third indicator of acculturation, Norwegian language use with the student's father, initially showed that nonwestern girls were less invested in their appearance compared with western girls, independent of the degree to which they use Norwegian at home. This matches other findings in this study, and does not suggest an acculturation influence on body image.

Initial analyses also showed that nonwestern boys who speak little or no Norwegian with their father were less satisfied with their body compared with nonwestern and Norwegian boys who speak mostly or all Norwegian with their father. This suggests an influence of acculturation on body satisfaction. Boys who speak less or no Norwegian at home may be less well integrated into Norwegian society, and may feel different culturally and in appearance, which in turn may link to body dissatisfaction.

Regression analyses. Regression analyses were performed to isolate a possible unique contribution to body image from each of the indicators of acculturation.

For girls, duration of residency in Norway had a unique and significant relationship with influence from media body ideals, also when internet use was controlled for. Norwegian identity had a unique and significant relationship with satisfaction with appearance, when self-esteem was controlled for. And type of religion – Muslim vs. non-Muslim – had a unique and significant relationship with investment in appearance, when internet use was controlled for. These findings suggest lines of inquiry for future studies.

When all acculturation factors were included in the regression model, the relationships between Norwegian identity and, respectively, investment in appearance and influence by media body ideals were no longer significant. This shows that there was no unique contribution from Norwegian identity to these two measures. Norwegian language use similarly showed no unique contribution to body image.

For boys, all significant relationships between ethnicity, acculturation and body image found in the initial tests disappeared in the regression models, suggesting no unique and significant contribution to body image for boys from any of these measures of acculturation. Initial analyses showed that students scoring higher in Norwegian identity were more satisfied with their appearance, and nonwestern boys who speak less Norwegian with their father were less satisfied with their appearance. These relationships disappeared in the regression analyses when self-esteem was controlled for. This suggests that higher self-esteem among western boys contributes to these differences, although the simple correlations did not show that western boys have significantly higher self-esteem compared with nonwestern boys.

Religion. Religion is, for many, central to their ethnic and cultural identity. It is, for that reason, perhaps not surprising that previous studies have found connections between religion and body image. What does the LUNO data reveal on this question of religion and body image?

Satisfaction with appearance. Previous studies on religion and body image have found a positive relationship between belonging to a religion and satisfaction with appearance (Dunkel et al., 2010; Kim, 2006; Sandberg & Spangler, 2007). Whether we looked at degree of religiosity, type of religion, or a combination of degree and type, the present study did not reveal a significant relationship between religion and satisfaction with appearance for either gender. Studies have found the strongest ethnic difference in satisfaction in appearance for people in their early twenties (Wildes et al., 2001), and if a similar pattern is found for religion and satisfaction with appearance, it is possible that the participants in this study were too young for such a difference to appear.

Investment in appearance and influence by media body ideals. In contrast to most previous research, this study addressed the connection between religion, and investment in appearance and influence by media body ideals. Initial analyses found highly religious girls to be less invested in their appearance and less influenced by media body ideals compared with girls who were less, or not, religious. Examining the correlations between the variables in this study suggests some possible explanations.

For girls, being religious is negatively correlated with socioeconomic status, which in turn is negatively correlated with appearance investment. Lower socioeconomic status may be one explanation for why more religious girls are less invested in their appearance. Similarly, there is a positive correlation between religiosity and self-esteem, and a negative correlation between self-esteem and influence by media body ideals. This suggests that higher self-esteem explains, at least to some extent, why more religious girls are less influenced by media body ideals.

Combining degree of religiosity and type of religion revealed that highly religious Muslim girls were less invested in their looks than both groups of Christian girls, as were less religious Muslim girls compared with less religious Christian girls. Highly religious Muslim girls were less influenced by media body ideals than all other groups. Controlling for the three acculturation factors left type of religion significant, and not strength of religiosity.

Muslim girls were less invested in their appearance and less influenced by media body ideals compared with non-Muslim girls, also when internet use and other variables were controlled for. Why do we find this difference? I will here discuss several possible explanations, including internalized Muslim values, reduced self-objectification, centrality of appearance to sense of self, and self-worth.

Internalized Muslim values may discourage girls from being invested in their appearance. A meta-analysis found feminist identity to be associated with lower internalization of media body ideals (Murnen & Smolak, 2008). If feminist values protect against body image problems, religious values and norms may function in a similar way. According to the anthropologist Khuri (2001) the body in Islam is seen as “a source of shame that must be concealed and guarded”, and women should be modest and avoid “dazzling looks” and other activities that may attract the attention of men. A study of Muslim women in the US found that those wearing head veil reported less drive for thinness than those wearing western clothing or non-western clothing without head veil (Dunkel et al., 2010). The authors suggest religious values are the explanation for this difference, since the head veil is generally used by more religious Muslim women, and it covers only the face and not the body.

Covering the body may also reduce self-objectification (Smolak & Murnen, 2007), allowing these Muslim women to identify less with their body, and also see it less as an object of desire for others. And a covered body may lead to a reduced public self-consciousness (Cash, 2002). Both of these factors may, in turn, protect against investment in appearance and influence by media body ideals.

The religion of Muslim woman may also be central to their sense of self, and their appearance may take a more peripheral role. This would explain a lower investment in their appearance, and also a lower level of influence by media body ideals. Similarly, to the extent that Muslim women experience themselves as loved by God, appearance may be less central to their self-worth, in turn making media body ideals and investment in appearance less important (Wood-Barcalow et al., 2010).

The view of Muniba Ahmad, a seventeen year old Muslim woman in Oslo, supports these four explanations (personal communication, March 18, 2013, see Appendix B). She said it is her relationship with God that determines her clothing, including covering her head, and this relationship also means that satisfying others through her appearance is of less or no importance to her. Covering her body and head allows her and others to bring attention to the personality more than her body, and her experience is that others relate to her more as a person, and listen more to her words, after she started wearing hijab. She also emphasizes that her religion has taught her that it is the character and behavior of people that matters, not their appearance. Here, we see an ideology discouraging an emphasis on how we look, that covering the body may reduce objectification, appearance playing a minor role due to the centrality of ones relationship to God, and self-worth coming from character and behavior more than appearance.

Finally, it may be interesting to look at why we found a connection between religion and body image for Muslim girls and not Christian girls. Three possibilities come to mind. Christian girls may objectify themselves to a greater extent, partly from wearing clothes that bring attention more to their bodies. Contemporary Christianity in Norway discourages investment in appearance to a lesser degree than Islam, and does not sufficiently protect against mainstream western norms for investment in appearance. And since a majority of Christian girls were less religious (392 vs. 77), in contrast to the Muslim girls, where a majority were strongly religious (36 vs. 152), the Christian group may not have been sufficiently different from the non-religious group for a difference in body image to become apparent.

There is also a question of why Muslim girls are less invested in their appearance and less influenced by media body ideals, and are still equal to non-Muslim girls regarding satisfaction with appearance. The correlations may suggest some lines of inquiry. For instance, level of religiosity is positively correlated with BMI and self-esteem. We also see that BMI is negatively correlated with appearance satisfaction, and self-esteem is positively correlated with appearance satisfaction. These opposite tendencies may cancel each other out.

If the same pattern is found for Muslim girls, it may explain why Muslim and non-Muslim girls are similar when it comes to satisfaction with appearance.

Limitations

One limitation of this study is that it is correlational and reveals relationships and not causality. The causal influence between two variables may, in many cases, be bidirectional, or involve a third variable.

The data is self-reported and thus may include mistakes and responses aimed at presenting oneself in a better (or sometimes worse) light. Self-reports of weight and height are generally reliable, with the exception of overweight adolescents who tend to under-report their weight (Lien, Kumar, Holmboe-Ottesen, Klepp, & Wandel, 2007).

Not every student answered the questionnaire, and of these, not everyone answered each question. It is possible that those who chose to not answer vary systematically from those who did answer, thus skewing the results of this study. For instance, some first generation immigrants may have trouble understanding questions written in Norwegian, and either did not participate in the study or misunderstood some of the questions.

LUNO is based on a city sample so we should be careful in generalizing to rural populations. Nonwestern youth in rural areas may differ from those in urban areas in significant ways. They may, for instance, adopt Norwegian ideals and norms more readily because they lack access to a substantial ethnic subculture. Mass media influence and body ideals most likely do not vary much between city and country in Norway.

As this study used a broad nonwestern categorization, it is reasonable to assume that this category masked a great deal of ethnic variation in body image. Previous studies suggest that some nonwestern cultures value a heavier body form, such as in Northern Africa, while other nonwestern cultures value a slim body, such as in South Asia. A more finely grained categorization may reveal that some ethnic groups diverge more from the western body ideal, while other groups are closer to this ideal. This more finely grained categorization was not possible in this study due to the sample size.

The students in this study were thirteen to fifteen years of age, with a majority being fourteen years of age. Internalization of cultural ideals and norms for body image occurs well before this age (Thompson et al., 1997), so it is perhaps not surprising they are present in this study. However, the most pronounced ethnic differences in body image are found in the early twenties (Wildes et al., 2001). It may be that the age group represented in the LUNO material is too young to present ethnic differences in body image that would be apparent a few years later.

The differentiation between findings that can be attributed to cultural differences vs. sociocultural differences is an important facet of this study. At the same time, it is possible that some or all of the findings attributed to cultural differences may in reality be due to sociocultural factors not included in these analyses.

The indicators of acculturation in this study were selected from the available variables in the LUNO material. They may fall short in terms of validity and reliability compared with existing instruments and scales developed specifically to measure acculturation.

Another limitation is inherent in the constraints of a paper for a master's degree. The LUNO material allows for a further and more finely grained statistical analysis than was performed in this study. This would perhaps answer some of the questions brought up here.

Conclusion

Previous research on ethnicity and body image has tended to focus on women and their satisfaction with appearance, and has left out measures of acculturation. This study included both genders, other aspects of body image, and indicators of acculturation. It may also be the first study of this kind using a Norwegian population.

The LUNO material revealed no ethnic differences in satisfaction with appearance for either girls or boys that can be directly attributed to culture. This may be due to a globalized western body ideal. It's also possible that ethnic differences would be more pronounced at a later age, as some previous studies have found. And a larger sample size could perhaps reveal significant differences not apparent in this data set.

This study did show that nonwestern girls were less invested in their appearance and less influenced by media body ideals compared with western girls, and that this may be attributed to cultural differences. It is possible that this reflects different cultural norms for investment in appearance. A substantial portion of the nonwestern students may have a cultural background where being overly invested in appearance is discouraged. It is also possible that another aspect of being nonwestern in Norway explains this difference, for instance not being able to live up to the Norwegian body ideals – such as skin color or the shape of the eyes – which in turn leads to lower investment in appearance and less influence by media body ideals.

Comparing religious groups, a similar pattern was found, only more pronounced. Muslim girls were significantly less invested in their appearance and less influenced by media body ideals compared with non-Muslim girls. This suggests that a portion of the difference in investment in appearance and influence by media body ideals found between nonwestern and western girls was due to religion. Religious ideals and norms may be one explanation for this

difference, and other aspects of being Muslim may also come into play, such as an alternative source of self-worth, placing appearance less central to ones sense of self, or simply the act of covering more of the body or covering it so the shape of the body is more hidden.

Although there was a difference in investment in appearance and influence by media body ideals between, respectively, nonwestern and western girls, and Muslim girls and non-Muslim girls, these groups were nearly equal on satisfaction with appearance. This is not surprising considering the low correlation between these measures. It may be that among those highly satisfied with their appearance, some may be highly invested in their appearance and others less so, and the same may be the case with their level of influence by media body ideals. The two other main channels of body image related messages – family and friends – may also compensate for messages from the media.

Why do we find these results for girls and not for boys? When it comes to being attractive to a potential romantic partner, women may see their appearance as more important, while men may rely more on status and competence.

Although several acculturation measures were linked with body image, only one can be said to support the idea of acculturation influencing body image. Boys who speak little or no Norwegian with their father were less satisfied with their appearance than other boys. Using another language than Norwegian at home may reflect a poor integration in Norwegian society, which in turn may lead to body dissatisfaction through variables not analyzed in this study.

Practical application. This study found small but significant differences in body image between ethnic groups, and it is likely that these findings mask a greater variability in body image among ethnic groups. Future interventions aimed at promoting a healthy body image, or preventing or treating an unhealthy body image, may benefit from taking possible cultural differences into account. Certain groups may be more protected against body image disturbances, such as Muslim girls, while other groups may be more at risk, such as second generation nonwestern immigrants.

Unanswered questions and future studies. This study opened up as many, or more, questions than it answered. Future studies on this topic may look at the unique body image characteristics of specific ethnic groups, cultures and religions. This would require a quantitative study with a larger sample size, a qualitative study, or a combination of these two.

Age is an important factor in ethnic differences in body image. Longitudinal studies may examine whether the pattern of ethnicity related differences in body image change over

time as subjects grow older. Are ethnic differences in body image more pronounced in the early twenties as some previous studies suggest?

The question of interplay between acculturation and body image was largely left unanswered in this study. If there is an initial cultural difference in body image, how does body image change with acculturation?

This study did not explicitly examine the culture clash theory. Do we find that for nonwestern students, a clash between the ideals and norms of their parents and those of their new culture is connected to body image problems?

When it comes to Muslim women, which aspects of their religion protect them from being as strongly invested in their appearance as other women? Is it Muslim values, an alternative source of self-worth, covering the body and face, a combination of these, or perhaps something else? And why do we find this pattern for Muslim women and not Christian women?

Another line of research is exploring the practical consequences of these ethnicity-related differences in body image. For instance, are these differences large enough to justify different interventions for different ethnic groups, or targeting certain groups for these interventions more than others? And, perhaps most interestingly, if there is something about certain cultures and religions that serve as a protection for body image disturbances, can we isolate this and build it into future body image interventions?

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Appendix A

Scales and items

Questions about birth place: “Er du født i Norge?” And the answer options: *Ja. Nei, jeg er født i* ____. “Om du ikke er født i Norge, hvor gammel var du da du kom hit?”

Questions about parents’ origin: “Mor er født i:”, “Far er født i:”

Questions about religion: “Hvilken religion eller trosretning tilhører du?”, “Hvor mye betyr religion for hvordan du lever til daglig?” And the answer categories were: (1) *Svært viktig. Jeg legger stor vekt på å leve etter religiøse regler i hverdagen.* (2) *Religion betyr ganske mye for hvordan jeg lever i hverdagen.* (3) *Religion betyr lite for hvordan jeg lever i hverdagen.* (4) *Religion har ingen betydning for hvordan jeg lever i hverdagen.*

Question about Norwegian identity: “Hvor ofte stemmer disse setningene på deg? Nedenfor står det noen setninger som handler om hvordan man oppfatter seg selv og hvordan andre oppfatter en. Vi vil at alle skal svare på spørsmålene. Sett ett kryss for hver setning.”. The items were: “Jeg tenker på meg selv som norsk.”, “Jeg tenker på meg selv som utenlandsk.”, “Jeg tenker på meg selv som både norsk og utenlandsk.” And the answer categories were: (1) *Stemmer alltid.* (2) *Stemmer ofte.* (3) *Stemmer av og til.* (4) *Stemmer sjelden.* (5) *Stemmer aldri.*

Question about language use: “I hvor stor grad bruker du norsk når du er sammen med familie og venner?” The items were: “Med far”, “Med mor”, “med søsken”, “med venner”. And the answer categories were: (1) *Alltid norsk.* (2) *Vanligvis norsk.* (3) *Like ofte norsk som et annet språk.* (4) *Vanligvis ikke norsk.* (5) *Aldri norsk.*

Self-esteem questions: “Først er det noen utsagn om hvordan du synes du selv er. Kryss av for det som passer deg best. (Sett ett kryss på hver linje.)” The items were: “Jeg er ofte skuffet over meg selv.”, “Jeg liker ikke måten jeg lever livet mitt på”, “Jeg er stort sett fornøyd med meg selv.”, “Jeg liker meg selv slik jeg er”, “Jeg er svært fornøyd med hvordan jeg er.”. And the answer categories were: (1) *Stemmer svært godt.* (2) *Stemmer ganske godt.* (3) *Stemmer ganske dårlig.* (4) *Stemmer svært dårlig.*

All seven items from appearance evaluation: “Jeg liker utseende mitt slik det er.”, “Kroppen min er tiltrekkende.”, “De fleste vil synes jeg ser bra ut.”, “Jeg er fysisk lite attraktiv.”, “Jeg liker utseende mitt uten klær.”, “Jeg liker måten klærne mine sitter på

kroppen min.", "Jeg misliker utseende på kroppen min." And the answer categories were: (1) *Helt uenig.* (2) *Delvis uenig.* (3) *Verken eller.* (4) *Delvis enig.* (5) *Helt enig.*

Six of twelve items from appearance orientation: "Før jeg skal ut blant folk ser jeg alltid etter hvordan jeg ser ut.", "Jeg er nøye med å kjøpe klær jeg tar meg bra ut i.", "Jeg sjekker utseende mitt i et speil så ofte jeg kan.", "Før jeg skal ut bruker jeg vanligvis mye tid på å gjøre meg i stand.", "Det er viktig at jeg alltid ser bra ut.", "Vanligvis tar jeg på meg det som passer der og da uten å tenke på hvordan det ser ut." The answer categories were identical to those under appearance evaluation.

Three items from SIA-Q: "Jeg skulle ønske at kroppen min så ut som kroppen til folk som er med I filmer.", "Å se i blader får meg til å ville endre på hvordan jeg ser ut.", "Å lese blader får meg til å ville gå ned eller opp i vekt." The answer categories were identical to those under appearance evaluation.

One item from SATAQ: "Jeg prøver å se ut som en idrettsutøver." The answer categories were identical to those under appearance evaluation.

Questions about weight and height: "Hvor mye tror du at du veier?", "Hvor høy er du?",

Questions in the digital media category: "Ser på videofilmer/DVD.", "Spiller TV-spill (f.eks. Playstation), PC-spill eller online-spill.", "Leter etter konkret informasjon på internet.", "Gjør lekser eller skolearbeid på PC'en." The answer categories were: (1) *Aldri eller nesten aldri.* (2) *1-3 dager per måned.* (3) *En eller flere ganger i uken.* (4) *Daglig eller nesten daglig.* (5) *Flere timer dager.*

Questions in the internet use category: "Bruker internet for å få nye venner.", "Bruker internet for å snakke med noen om et vanskelig tema.", "Bruker internet for å si min mening om samfunnsspørsmål.". The answer categories were identical to those under digital media.

Appendix B

Personal communication with Muniba Ahmad, a 17 year old Muslim woman living in Oslo, on March 18, 2013. Included with permission from the author.

Hei Per!

Jeg har valgt å gå med hijab. Grunnen til dette for meg personlig er ene og alene Gud. De andre effektene hijaben har hatt på meg har kommet i etterkant og var ikke noe jeg tenkte på før jeg begynte å gå med hijab.

Jeg tror grunnen til at muslimske jenter/kvinner ofte er mer fornøyd med sitt utseende er nettopp dette. Jeg for eksempel har ikke behov for å tilfredsstille hva andre synes om utseende mitt. Så lenge Gud er fornøyd er jeg fornøyd :-) Jeg bryr meg mildt sagt ikke om jeg går opp eller ned et par kilo - så lenge helsa mi er i god behold. Om morgenen tenker jeg ikke på hvor ille jeg ser ut på håret - jeg tenker på hvordan jeg kan formulere et svar til Siv Jensen sin kronikk jeg leste før jeg la meg.

Klesdrakten vår gjør ofte at vi har fokus rettet mot personligheten vår - ikke hvilken sminke vi bruker eller hvor tynne vi er. Jeg har gjennom min tro lært at det er egenskapene og oppførselen til en person som teller - ikke kroppen!

Jeg har også lagt merke til forskjellen på hvordan folk snakker til meg før og etter hijab: når folk snakker til meg, snakker de til meg som person - ikke som kvinne. Fokuset er ikke rettet mot at jeg er kvinne, mitt utseende og min kropp - noe som dessverre er en tendens vi ser alt for mye av i dagens samfunn - men fokuset er derimot rettet mot hva jeg sier.

Når det er sagt er det klart at mange muslimske kvinner velger å ikke dekke seg til. Jeg regner med at disse også er fornøyde med sin kropp og utseende. Så hijab er ingen nødvendighet for å føle seg fornøyd med seg selv ;-)

Muniba